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ABSTRACT

An analysis, development, and research (ADR) approach for planning educational research and development programs was used as a model for planning the National Institute of Education's School-To-Work Transition Program. The ADR model is system oriented and utilizes an iterative approach in which research questions are raised as others are answered. Four levels of analyses (further definition of NIE program goals to include specific behaviors, definition of direct treatments to achieve goals, test treatments in a work situation, and adjust treatments after populations and contexts of program operation are analyzed) are combined in a fifth level where a complete program is presented. Answers to questions left unanswered by the model in the school-to-work context were sought using measures in six areas: identifying and monitoring changes in the societal problem (using existing surveys); collecting data for hypothesis generation (using existing longitudinal studies); identifying and legitimizing desired outcomes (using an appropriate existing set of objectives); identifying and screening entering populations; ensuring integrity and replicability of treatments for individuals and institutions; and determining achievement of student outcomes and transfering control of evaluation to the students themselves. (Additional relevant materials are contained in appendixes.) (AG)

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PLANNING AND MEASUREMENT IN SCHOOL TO WORK TRANSITION

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November 29, 1972

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APPENDICES A through E

Planning and Measurement in School-to-Work Transition

This paper describes an analysis, development, and research (ADR) approach for planning educational R & D programs. It also discusses the different kinds of measures that would be required to use that model in the School-to-Work Transition Program proposed by NIE's new Initiatives Task Force. The paper's dual purpose is to spark some interest in using the ADR model for program planning and to contribute to plans for School-to-Work Transition.

The ADR model was described and discussed at an October, 1972, meeting of members of the Career Education Task Force and New Initiatives Task Force. Part I of this paper presents the model discussed there; Part II, drawing upon an August planning paper written by Harry Silberman, illustrates the model in the school-to-work context; and Part III describes the program measures that are available and needed.

I. An Analysis, Development, and Research (ADR) Approach to Program Planning

The ADR model is an iterative approach to Research and Development. That is, it proposes a sequence of research analyses which lead to development and demonstration activities, which in turn raise further research questions that must be answered before development can be completed and replicated successfully. A second feature of the ADR model is its system orientation. While most program planning accounts only for activities directly applied to individuals in order to change their behavior, the ADR

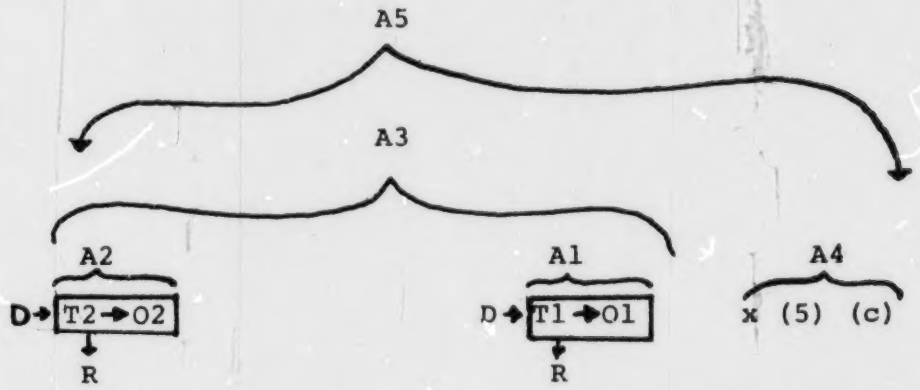
model goes beyond these first order treatments. It includes activities directed toward structural changes in institutions, or second order treatments, that must take place if the first order changes are to survive without the special dispensations usually granted to experimenters. Finally, the ADR approach includes an analysis of sub-populations and different contexts in which replication of the developmental program is expected. This helps the experimenter to anticipate wide scale implementation problems and to devise, during the development process itself, strategies for overcoming such problems.

On October 30 a diagram to represent the model was circulated to members of the Career Education and New Initiatives Task Forces. This diagram, with minor changes in the explanation, is shown in Figure 1.

In the diagram, the Policy Analyses are numbered from 1 to 5 to show their probable sequence. That is, an analysis of the outcomes desired for individuals and the treatments that are likely to produce those individual outcomes (first order change) should be closely followed by an analysis of necessary institutional or second order changes (A1 and A2 respectively in the Figure 1 diagram). A3 establishes the prerequisite relationship between the second order institutional changes and the first order subject changes. A4 is concerned with the replicability problem, and is an analysis of subject or population characteristics and contextual characteristics (rural/urban, for example) that might interact with treatments. A5 is

Figure 1

Model of A, D, R Approach for Educational Research



A = policy analyses

D = development and demonstration activities

R = research required by, emerging from, program developments

T = treatment or intervention (T1 = for individuals; T2 = for institution)

O = outcome (O1 = effect on individuals; O2 = institutional or systems outcomes)

S = subject or population characteristics

C = contextual influences interacting with T1→O1

the analysis that combines the components into a total program that operates in a real setting.

Though the planner is concerned with the analysis steps and their resulting policy documents, the activities upon which those documents are based should not be deemphasized. An important task is determining what the outcomes, treatments, population, and environments are for this program. Since this must be done at more than a conceptual level, the definition will require measures. Once the components are defined and their existence in the program can be determined, establishing the causal relationship between a treatment and outcome may require developmental activities, observational studies, use of unique measures, and experimentation. These are represented on the model diagram as D for development and R for research. Because research is not expected to be the initiator of analyses and developmental activities, but rather to follow from their needs, the R is shown growing out of the T/O development level. With this variety of research and development combined with iterative planning to reach analysis level 5, the model's implementation is likely to span a period of several months to several years, depending upon the nature of the program.

II. An ADR Model of the School-Work Transition Program

A. Program Description

The proposed NIE School-Work Transition program has as its primary goal the identification and implementation of methods for easing the transition of young people to adulthood.

The program has three central themes or hypotheses to be tested. It suggests that young people will be more satisfied and successful in adult roles, more adaptable and flexible in occupational choice throughout life, and more successful in work situations if their education includes these three items:

- a wide variety of work, avocational, and service experiences
- exposure to adults who have many different roles in society
- allowance for recurring educational experiences throughout life rather than the current pattern of full time school followed by full time work.

Because schools are structurally unable to provide these components, the new program would change the locus of education to the workplace, where important decisions are being made, where contact with influential adults is available, where real consequences result from what one accomplishes. The learning experiences would be conducted entirely within an organization which has reorganized itself internally so that the young people are integrated into its most important activities. The experiences provided there would not be intended to impact specific occupational skills so much as to help students acquire the generalized coping behavior and attitudes necessary in the adult world.(1)

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(1) Harry F. Silberman, "An NIE School-Work Transition Program," National Institute of Education, August 4, 1972. (Unpublished)

Of course, the expected effects of a variety of work experiences and role models, and a change in the traditional school-then-work pattern of education represent hypotheses to be tested, rather than already-proven statements. The purpose of the R & D program is to define and test these hypotheses, and the ADR model describes a sequence of activities for doing just that. The following sections work through the model, providing examples of the kinds of planning and R & D products that would be involved.

B. Level 1 Analysis

In its first level of analysis, the model calls for definition of desired outcomes and of direct treatments for individuals in order to achieve those outcomes. Though the School-to-Work program's goals are already stated as satisfaction, flexibility, and success in adult roles, the objectives must be defined by more immediate behaviors that are assumed to promote program goals. For example, we may seek to help students feel in control of their own personal lives, to confidently engage in activities, to have well organized, effective work habits, and to be honest and considerate in interpersonal relations. These more immediate behaviors in turn must be defined by more specific behaviors. That is, people who feel in control of their own lives can make decisions and follow up on them, and have relatively accurate self knowledge. To be more specific yet, they can state the purpose of their own activities, can plan for future security by buying insurance or budgetting income, can judge their own work or product quality with fair

accuracy, feel able to and responsible for choosing an occupation and feel able to perform successfully on a job. Individuals who are confident enjoy learning new things, can perform a variety of tasks or the same task in a variety of situations, find interesting things to do, routinely compare new ideas and opportunities with old ones, etc. Honesty and consideration in personal relations includes being willing to help others learn, finding and approaching appropriate people for information, recognizing that people have different attitudes toward work, friendship, and life in general, accepting family and community responsibility, etc. A list of good work habits may be even easier to develop. Much more complete lists of behaviors than these, along with the way they appear in typical activities and interactions of young people must be defined as part of Analysis 1 (A1) in the ADR model.

A second part of A1 is a definition of direct treatments that are likely to promote development of the desired outcomes. The School-to-Work Transition program should provide exciting opportunities for learning theorists in this part of the analysis. It can allow them to extend the principles discovered in laboratory and classroom to a broader learning arena. Role modeling, intrinsic rewards, applying incentives, timing of learning activities, graduated difficulty of tasks, appropriate practice, variation of experiences for generalization, etc. are all likely to be important. For example, the student in a workplace is likely to:

- appropriately imitate a person he sees rewarded or punished for work performance
- have a pleasant feeling of power when his decisions are carried out
- be discouraged from undertaking new things if he faces too many difficult tasks and fails
- remember those activities he practices
- be eager to learn when instruction comes just before he is asked to use what he learns in a job
- perform new tasks when he has had the opportunity to undertake similar tasks in different settings.(2)

The School-to-Work Transition, by proposing a wide variety of work experiences, exposure to adults in different roles, and recurring cycles of education and work, already builds in several of these principles in a way that schools are structurally unable to do. However, not all work experiences would be equally educational, and not all adults would make equally good models. The program designers in the AI analysis must identify, perhaps using principles like those above, the characteristics of learning places that are most likely to promote outcome behaviors.

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(2) For example, a person who has obtained bus routes and schedules, ordered college catalogs, called the city for information on codes and regulations, is likely to be able to find out where his polling place is and what the residence rules for voting are.

C. Level 2 Analysis

Although first order treatments and outcomes may be found workable in an experimental setting, they frequently fail when moved to institutional settings within society. Consideration of what it would take to move from laboratory to real world setting is the task of Analysis 2. For example, we do not know what it would take for a company to accept a group of high school students and let them try a number of jobs that are vital to production or services over a period of months. Nor do we know what would make parents accept such experiences for their children in lieu of academic, classroom presentations. What wage level would satisfy both students and unions and how much is the very strong public school institution - especially in a time of teacher surplus - willing to give up? We do not know how to help career education programs compete with the prestige of academic education, nor how to adjust supply of such an educational alternative with geographic and temporal differences in its demand. Each of these second order outcomes and the institutional treatments that will be required to achieve them are difficult to identify and uncomfortable to consider, but are a matter of grave concern. Though A2, or the analysis of such second order treatments, is sequenced after the planning for direct learning experiences, it should begin quite soon in the planning process, and rely heavily on non-educators. That is, politicians, management experts, and representatives of private

enterprise should join with social scientists in specifying institutional outcomes and second order treatments to achieve those outcomes.

D. Analysis Levels 3, 4, and 5

The major concern in A3 is to synthesize and adjust the fairly separate first and second order treatments so that learning experiences which cannot be accommodated by the relevant institutions are not being proposed. A3 has many of the characteristics of a trade-off analysis. That is, how much institutional change does it take to get a particular direct treatment to function? Is the outcome worth the effort of institutional change? Does the institutional change cause some other part of the institutional system to malfunction? Is the program's outcome or purpose worth that malfunction (or repairing it)? Because this level of analysis has not been undertaken for the School-to-Work Transition program, one can only guess at what some of the variables might be:

- costs to firms of productivity loss
- effects upon older marginal employees
- costs to government of possible tax write-offs
- problems of raising aspirations beyond what the job market will support
- amount of reorientation possible before a workplace turns into a school
- side effects of conflicting program values and

cultural values (e.g. competition vs. cooperation in Chicano and Indian cultures)

- interactions of race with the program's plans for role models
- changes in colleges and universities if such a program is successful
- etc.

While many of these variables fall into A2, they become a part of A3 when they are considered in relation to trade-offs with different degrees of the treatment/outcomes involved in A1.

A4 is an analysis of populations and contexts to which the program might be expected to generalize. The R & D plan calls for a program for all youth. A4 identifies (1) student sub-groups - black, female, rural, alienated children of the affluent over achievers, etc. - that have characteristics different enough to require differences in treatment, and (2) context differences that might be resources for, or interfere with treatments. Possible examples of contextual variations are concentration of industry, strength of unions, conservative vs. liberal environment, influence of nearby colleges, availability of small business cooperation, extent of government employment nearby, etc. Though A4 is ostensibly concerned with problems of generalizing an initially successful program, and for that reason is placed fairly late in the analysis sequence, an earlier initiation of this task might allow sampling of subject/context

configurations for the original experimental tryouts, thus greatly improving probability of successful implementation of the program on a broad scale.

The final level of analysis - A5 - presents a complete R & D program that considers relationships among direct treatments and outcomes, second order institutional treatments and outcomes, and problems of implementing the program with new people at new sites. It is a program based upon collection and analysis of various kinds of data, upon developmental and research activities that establish the direction of causal relationships between treatments and outcomes, and upon synthesis and consideration of these imputs by experts with appropriate knowledge and skills.

E. Placement of R & D examples within the model

The August planning paper for School-to-Work Transition contained a list of suggested research and development projects that might initiate the new program. The projects were categorized according to whether they focused on providing new learning experiences, exposing youth to new adult roles, or building better articulation between school and work. The list was drawn up before the model was conceived, but in order to test how well the model accommodates a variety of activities, each of the R & D suggestions were categorized within the model. (See Appendix A) This was not difficult to do, and actually revealed more interesting things about the list than it did

about the model. First, no suggestions went beyond the A2 level of analysis, and not all components below that level were treated by a suggestion. Second, the School-to-Work articulation section had no suggestions related to direct treatments or outcomes for students; all of its activities were related to institutional change. The Role Models suggestions, similarly, had very few items, and almost none of these were concerned with student outcomes.

These gaps suggest several things. One, obviously, is that Dr. Silberman never meant for the paper to outline a complete R & D program, but rather only to briefly discuss interesting components. A second is that the three components of the paper - experiences, role models, and articulation - do not stand alone, but probably should be fit into one program. Third, the program planning would benefit from a systematic following of the model, working out in complete detail each level of analysis. The examples and discussion presented earlier might assist those who attempt this systematic planning. Another step that is very important to take is the identification of measures, or their development, for each outcome, treatment, population characteristic, and context, as soon as these components are defined. In some cases, iterative development of measures may even help define the component.

III. Measures for School-to-Work Transition

Measures are defined quite broadly for the purpose of this paper. They include all procedures for the systematic collection of data to describe characteristics of people, places, and activities. They support our inferences about observed consistencies in the environment and the explanation for those consistencies. In educational development they provide evidence that a program is needed, that replicable treatments do exist, and that particular effects follow the application of those treatments.

There are at least six problems associated with the School-to-Work Transition program which require measurement:

A. Identify and monitor changes in the societal problems that the program addresses.

B. Collect data for use in hypothesis generation.

C. Identify and legitimize desired outcome.

D. Identify and screen entering populations.

E. Ensure integrity and replicability of treatments for individuals and institutions.

F. Determine student outcomes, including transfer of control of evaluation to the student himself.

Each of these problems of measurement is discussed below, describing some of the existing measures and gaps and indicating where each measurement problem is relevant in the ADR model.

A. Identify and monitor changes in the societal problem that the program addresses.

The School-to-Work Transition program addresses the difficulties that youth have in becoming adults. There are many likely indicators of such difficulty: expressed dissatisfaction of both youth and adults, high rates of unemployment for young people, wide spread under-achievement in school, youthful vandalism, demonstrations, etc. Certainly an experimental program is not likely to cause dramatic changes in such indicators until it has proven successful and been implemented on a broad scale. However, collecting the data on a continuing basis will assure policy makers of the need for program development and may give insights into needed emphases in the R & D effort. These considerations are largely a part of Analysis level 5 in the ADR planning model.

Characterizing the state of the problem in the nation can be done with fairly large cross sectional studies that use representative samples and are repeated at periodic intervals. Since the purpose is not to trace particular people or to infer causality, longitudinal studies are not strictly necessary.

The current cross sectional data collection that is potentially most useful for Career Education is the Career and Occupational Development (COD) Section of National Assessment. Because the general purpose of National Assessment is to report on educational achievement in the nation, other parts of the data will be of secondary interest also. The plan is to draw a sample of 9, 13, 17, and 25-year olds for two assessments, five

years apart, with especially developed exercises. The sample is drawn so that no examinee takes all exercises, and there are 2,000 responses for each exercise. Information is broken down by region, size and type of community, sex, color, and SES.

Because the COD objectives are available now,(3) the content can be identified in some detail. Information will be collected on planning and decision making skills, general skills like communication and arithmetic, work habits, and attitudes toward work. The exercises are currently being tried out, and assessment is planned for 1973 and again in 1978-1979. The project permits use of anything that is published, but the exercises will not be published until 1975 when the analysis is complete. Only 50% of the exercises will be published then, since they are to be used in the later assessment. It is expected that any analysis of the data for special purposes will have to be undertaken and funded by the interested agency.

The greatest shortcoming of National assessment for planning R & D programs is the lack of access to the exercises; all planners can do is guess whether specific questions will suit their needs. A second problem is the time line. The 1975 date for completion of the analysis precludes its use in program planning and development - for three years at least. Finally, the breakdown provided - region, age, size and type of community, sex, color,

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(3) Objectives for Career and Occupational Development, National Assessment of Educational Progress, Denver, Colorado, 1971.

and SES, is probably too narrow to identify population characteristics that could be the basis of unique treatment groups.

The COD objectives seem interesting. If the exercises promised as much and were available, they could be used for small intensive surveys of specific populations to give more usable information about transitional problems in society. If a few questions could be added to the current study concerning amount, kind, and quality of work experience, the planners might get some interesting correlates with the attitudinal responses.

A second data collection effort - largely cross sectional - that could prove useful in identifying youth transition problems is the Current Population Survey.(4) This joint Bureau of Census - Bureau of Labor Statistics venture provides data from economic and employment indicators on a monthly basis. An interview is conducted on the 19th of each month sampling 863 counties and independent cities in 449 areas. Each sampled household is interviewed for four consecutive months, followed by eight months without interview and then four more months of interviews. One person answers questions for the whole household. Part of the sample changes every month, with 75% common from month to month and 50% common from year to year.

Data is collected routinely on (1) rate of unemployment by

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(4) Concepts and Methods Used in Manpower Statistics from The Current Population Survey. Bureau of Labor Statistics Report #313. Current Population Reports P-23, #22, June, 1967.

duration, industry, occupation, sex, age, color, marital status, and labor force time lost; (2) employment by sex, age, class of worker, occupation, color, number of hours worked, and persons with a job but not at work; (3) labor force size, sex, age, and color; (4) persons not in the labor force and (5) seasonally adjusted data.

Though this list is not impressive as far as program planning is concerned, additional inquiries are made for special reports. For example, data on work experience of the population, multiple job holders, employment of school age youth, employment of high school graduates and dropouts, educational attainment of workers, why the unemployed started looking for work, etc. are collected on some occasions. The reports are usually published in the Monthly Labor Review and might be useful to planners. Also, it seems possible that NIE might get some of the questions they wish to have answered on a periodic basis included. Because of the obvious efficiency of "hooking on" to an existing survey, this should be investigated.

Finally, there are many one-time surveys the results of which should be considered and synthesized, not only for cross-sectional information, but also for trend possibilities. For example, quite a number of studies on aspirations and values of youth were recently collected and abstracted by a group at the College of Human Development, Pennsylvania State University. These might be examined for possible changes in attitude over a period of

years. Actual behaviors indicative of transitional problems have also been the subject of one-time studies that should be the object of a literature search. A good example is a study conducted about three years ago on disruption in public schools, in which the extent of fairly specific disrupting behaviors (e.g. teacher or student boycotts, arson, property damage, rioting, picketing, physical confrontation, etc.) was determined for schools in each region of the country.(5)

B. Data for use in hypothesis generation

Though cross-sectional studies like those described in Section A can contribute to generating proposed solutions, longitudinal data are probably needed also. This is because we can more justifiably infer causality when we find that one event consistently follows another. Consider three hypothetical examples of relationships that might be discovered in a longitudinal study:

(1) High school students who are held responsible for some work grow up to feel able to succeed in a career.

(2) Workers who have had young trainees to introduce to their job later feel more secure about their own skill.

(3) Girls who, at a very young age, do tasks that require mechanical skills grow up to feel as competent as men more often than girls who do not try such tasks.

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(5) Bailey, S. K., Disruption in Urban Public Secondary Schools, Syracuse, University Research Corporation.

If we discovered these relationships, we would have three hypotheses that are probably worth the expense of a direct test in a developmental program. The first example is concerned with direct treatment to individuals and thus falls in the A1/T1 level of the ADR model. The second, more concerned with benefits to the industrial institution, is probably a part of the A2/T2 levels of analysis. The third example relates to a specific population and falls into the A4 level of analysis.

There are several existing longitudinal studies that might provide some data for hypothesis generation in the School-to-Work Transition program. In one or two cases the studies could be extended to gain more useful information, thus avoiding a completely new study. Finally, studies of the treatments and effects of other manpower programs might lead to testable hypotheses for the program.

The longitudinal studies that seem most likely to be useful are the Labor Department's studies of the educational and labor market experience of male youth and of young women.(6) The purpose of these studies was to identify variables that permit some members of a given age-education-occupation group to succeed in work while others do not. 5,000 male and 5,000 female subjects between the ages of 14-24 are being interviewed annually. The project, which began in 1966 for boys and 1968 for girls, is

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(6) Herbert S. Parnes of Ohio State University was principal investigator in the project.

collecting biographical, health, attitudinal, work experience, and occupational information through personal contacts with each interviewee. Questionnaires are also being sent to schools to collect data on observable aspects of school quality.

The project has resulted in three major reports for each year's interviews with the young men[7] and one for the young women[8]. A sample of findings from Volumes I and III on young men may give some insight into the data.

- From the first year study of young men: Students and those not in school hold different kinds of jobs. Construction and manufacturing account for about half of the out-of-school youth, but for less than a fifth of the students. Trade and service indistries employ almost two-thirds of the students in contrast to less than a third of those not in school (p.86).
- Most employed students found their jobs through friends and relatives. The unemployed seeking work place much more reliance on direct contacts with employers. (p.100)
- Young people who make an occupational change are much more likely to make a substantial change, from one occupational group to another, than a slight change

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(7) Career Threshholds, VI, VII, and VIII. Manpower Research Monograph #16, U.S. Dept. of Labor, 1970-1971.

(8) Years for Decision, VI, Manpower Research Monograph #24, U. S. Dept. of Labor, 1971.

within a major occupation group.(p.108)

- For the total group of white youth, there is no difference in degree of job satisfaction between high school drop-outs and those who received diplomas.(p.140)
- Within the white collar group degree of job satisfaction is directly related to educational attainment, while within the blue collar group the relationship is inverse.(p.140)
- Farm workers, professional and technical workers, and craftsmen are most likely to like their work best for its intrinsic qualities. Extrinsic factors are selected most often by salesmen and men in the clerical and service occupations.(p.144)
- Extrinsic characteristics of jobs, if unsatisfactory, can produce job dissatisfaction, but they are generally insufficient, even if attractive, to create feelings of satisfaction with a job.

From the third year study:

- Additional job opportunities under child-labor laws and eligibility for a drivers license are more highly related to getting a job than increased knowledge and greater flexibility of hours.(p.17)
- Between 1966 and 1968 more than half the young men changed jobs and three-fifths changed their type of work. Job changers enjoyed larger wage increases and

more job satisfaction than non-changers.

These relationships seem interesting enough for NIE investment in a closer look at the data. The Labor Department is making the tapes available as well as all relevant materials, and has published an invitation to interested researchers to use them. Some funds for such study will be available from the Labor Department itself. There are obvious limitations in the data, however. The job satisfaction and job attachment measures rely on very few questions, information on the qualitative nature of high school jobs and on unpaid high school work and service experience is almost entirely absent.

There are several other longitudinal studies which are less extensive in time or sample size, and use self-administered questionnaires rather than interviews to collect data. Among these are the NCES Longitudinal Study, Project Talent, and the Youth in Transition study. The NCES study collects attitudinal biographical, occupational, and achievement data on a national sample of 16,000-20,000 high school seniors, and repeats the data collection with appropriate changes 18 months later. Instruments for the base year study were developed in 1971 by Research Triangle Institute. In 1972 Educational Testing Service revised and implemented the base year instruments. The same company has developed follow-up instruments for Fall, 1973 implementation by the Census Bureau. These questionnaires are currently being revised.

One of the major shortcomings of the study from the view of program planning is the lack of qualitative information sought on the work situation. Students are asked little more than how many hours a week they work. Another problem is that the length of the instrument and wording of the questions are likely to discourage serious consideration by students, especially when they have left school and are no longer "captive." Since NCES staff members seem eager to have suggestions, NIE might well have some input to correcting these shortcomings, but action must come quickly if at all. Appendix B contains a memo which discusses the study and suggestions for change in a little more detail.

One of the goals of Project Talent is to formulate a better understanding of how young people choose and develop their life work. Data are collected at periodic intervals between 1960 and 1983 on students who were in grades 9-12 at the beginning of the project. The information includes achievement scores, biographical data, interest and personality test scores. Though the data tapes are available and a number of interesting studies have been done using them, Project Talent has at least one major shortcoming. Its loss of subjects is great;for example, only 31% of the 9th graders remained in the sample five years after they left high school. Though NIE should be alert to interesting studies that use the data, planners will probably find other sources more useful in hypothesis generation.

The final longitudinal study to be mentioned is the Youth in

Transition study, directed by Jerald G. Bachman of the Survey Research Center of the University of Michigan. Though the purpose of the study was to examine the cause and effects of dropping out of high school, the data can address some broader questions. The subjects were 2,000 tenth grade boys for whom information was collected in the Fall of 1966, the Springs of 1968 and 1969 and one year after they left high school in the summer of 1970. 73% of the sample still remained in the study at the last date of collection. Information was collected on family background and intelligence, on differences among high schools and vocational programs, and on post high school environments. Among the study's findings are that high SES, getting along with parents, Jewish religion, and high self-esteem are all related to not dropping out. Personality dimensions showed little change when a student dropped out. Work experience was related to aspiration and a need for self development, and there were positive relationships between self esteem and a need for self development and aspiration.

The people who conducted the study are proposing a 1973 collection of data. Among the purposes of the follow-up are these:

(1) Examine the impact of early part-time and part-year job experiences during school.

(2) Try to distinguish between those who remain steadily employed and those who do not, and then search for correlates of the behavior.

(3) Describe the standards by which jobs are judged acceptable to different youth.

These questions are certainly pertinent to hypothesis generation for School-to-Work Transition, and the project's research staff invite cooperation of the agency in developing other questions. Supporting this study certainly seems a cost effective and quick way for NIE planners to collect needed information. The research staff's preliminary proposal is included as appendix C to this paper.

A final source of information for hypothesis generation is the assessment of treatments and their effects in other manpower programs. Neighborhood Youth Corps (NYC) and the Job Corps, though they have a relatively narrow target population, do have a lot of experience and an interesting backlog of research. Job Corps, particularly, has some potentially useful techniques for collecting and analyzing data and a wealth of research information available to predict who does well in their program. One of the most interesting studies, however, was done by Richard E. Sykes, using an NYC population.(9) Six factors were described as important in the work environment of the youth in the study. They were placement in:

- an existing, structured adult job rather than a newly

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(9) Sykes, R. E., A Pilot Study in Observational Measurement of Behavioral Factors Associated with Increased Employability of Out-of-School Neighborhood Youth Corps Enrollees. Contract 41-7-008-25, Dept. of Labor, University of Minnesota, Dec. 1969.

invented one

- a task that is necessary to the organization
- an activity with high status
- a task that involves learned skills
- a job that is similar to an adult role
- a job requiring interaction with adults

Though this was only a pilot study and the observations remain to be rigidly tested, this kind of work can be a good contribution to design of treatments in new program planning.

Almost all of the available work reported here has been at the direct treatment or T1 level of the ADR model. Though the neglect of the T2 or institutional treatment level of analysis is partly due to a shortage of this writer's time, another major factor is simply the newness of such change as a part of educational research. One of the greatest gaps to which planners must address themselves is the collection of data and generation of hypothesis about institutional changes that must take place to support the learning treatments.

C. Identify and legitimize desired outcomes for students.

Identifying desired outcomes for students is a part of Analysis level 1 in the ADR model and is included as a measurement problem because measures cannot be developed until objectives are defined. Not only must definitions be specific and clear, but the designers of the program must understand and accept the objectives. Also, the objectives must be recognized and accepted by

both the professional community and the public at large if the program is to be implemented on a broad scale after experimentation. To satisfy these requirements, program designers need to personally examine outcomes in relation to the specific behaviors that are implied and to acceptability in terms of their own and society's values. Personal commitment is probably most complete when the designers develop objectives for themselves, but the objectives must also be made public so that unanticipated reactions to them are less likely to arise at a later date and interfere with program implementation. In order to shorten this "legitimizing" process, the program planners might make a list of objectives for themselves - one to which they can feel committed - then search the literature for similar statements that have already been exposed to public scrutiny. If a fairly close match is found, some adaptations might produce a list that elicits the planners' personal commitment and still has the legitimacy of the published lists.

This writer fairly successfully attempted such a procedure. The objectives (listed in Appendix D) were originally created, but the National Assessment Program's Career and Occupational Development (COD) Objectives were located later and found to be a good detailed statement of nearly the same attitudes and behaviors. Obviously, the COD objectives have much more detailed development and public tryout. A second example of fairly similar objectives are those of the Life Skills Education Project under the direction of Winthrop Adkins at Columbia University. A third

set of behavior categories was developed at a September, 1972, conference on Coping Skills held at the Appalachian Adult Education Center. Figure 2 lists the areas of objectives for each of the lists mentioned above.

Because the National Assessment objectives have been so completely developed and widely distributed, it is recommended that the School-to-Work Planners consider them for adoption as program objectives, perhaps with a few adaptations to accommodate non-work oriented maturity. Their five broad areas are as follows:

I. Prepare for Making career decisions

II. Improve Career and Occupational Capabilities (i.e., make and implement career plans, and engage in school and out of school activities that enhance career opportunities.)

III. Possess skills (numerical, communication, manual-perceptual, etc.) that are generally useful in the world of work.

IV. Practice effective work habits.

V. Have positive attitudes toward work.

To illustrate the level of the objectives, Appendix D, Part II lists detailed definitions for the second and fifth broad areas above.

D. Identify and screen entering populations.

Identifying entering populations is important to appropriate

Figure 2

Areas of Different Lists of Objectives Related to Maturity in Personal Development

National Assessment	Life Skills Education	Coping Skills Conference
1. Career Decisions	Self	Advocacy
2. Career Preparation	Family	Aging
3. Communication, problem solving, manual skills	Community Job	Community Consumer Economics
4. Effective Work Habits	Leisure	Education
5. Positive Attitudes toward work		Family Health Housing Insurance Jobs and Income Leisure Mobility Skills Relating to Others Self Taxes Transportation

design of experimental treatments and to replication of the treatments with different populations. These are, respectively A1/T1 and A4/S levels of analysis in the ADR model for planning. One way to define populations is to accept someone else's definition.

A number of researchers have divided youth into intriguing conceptual categories. Dale Tussig, for example, characterizes students as three types:(10)

(1) one who accepts the traditional economic purposes of life and has been successful in school and rewarded for achievement orientation; (2) one who also accepts the work orientation as life's central theme, but has not been successful in the classroom and does not understand how to get the school to help in achieving economic independence and security; and (3) the student who has rejected the traditional achievement ethic and is casting about for new meanings and a new sense of purpose in life. These are most frequently the suburban youth who have never experienced want and never seen struggle for security; they do not recognize the difficulty that many individuals have making a living, and do not see that their striving, business oriented parents are particularly happy with their success. Tussig calls these types

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(10) Tussig, A. Dale. Post Secondary Education: Where Do We Go From Here? Syracuse Policy Research Center.

makers, non-makers, and past-makers respectively. Lionel Lewis identifies college subcultures as academic, collegiate, and consumer-vocational, depending upon their involvement with ideas and their attachment to their specific school.(12) Theodore Ferdinand characterizes college students as Rationalists, Conventionalists, Pragmatists, and Activists, based on general personality dimensions.(13) No doubt many other categorizations could be discovered in the literature which might seem to be useful shortcuts to population definition for application of treatments. They also have the advantage of avoiding differences based on race, sex, SES, etc.

The problem with the unique categorizations arises when one tries to define how the people in them initially behave in relation to the program's defined outcome behaviors and how the treatments should differ for each group. Having attempted the task with the original set of objectives found in Appendix D and the Tussig categorization, this writer is convinced that the task cannot be "arm-chaired." Distinctions become very fuzzy when they are examined closely.

A better approach is for program designers to begin with the outcomes, spend some time observing the target groups and collecting

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(11) Lewis, L.S. "The Value of College to Different Subcultures," School Review, V. 77, No. 1, March, 1969, pp.32-40.

(12) Ferdinand, T. N. "Personality and Career Aspirations Among Young Technologists," Human Relations, V. 22, April, 1969, pp. 121-135.

data on them, and then try to distinguish among groups in relation to the outcome behaviors. In some cases pencil and paper tests might help in data collection. A brief review of such available tests[13] shows that they fall into several content categories:

(1) Measures of work-related behaviors such as leadership, supervisory ability, business judgment, management, peer relations, knowledge of careers and skills needed to obtain a job.

(2) General personality dimensions and measures of self concept.

(3) Measures of values.

(4) Interest inventories.

(5) Personal history questionnaires.

Typical formats for the tests include asking the examinee to check an objective or a statement that describes himself; to judge the best or truest of a set of debatable statements, or to choose the best solution to a hypothetical work or social problem.

One of the most promising paper and pencil tests for adolescents is still in development. Norman Freeberg and Richard R. Reilly of ETS are constructing and validating a measure of aspirations, community adjustment, and attitudes toward self and work for Neighborhood Youth Corps enrollees. The test consists of 13 booklets that rely heavily upon illustration to reduce the reading level. Development has reached the validation stage, and

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(13) Informal notes on tests included in the review are available on request.

the test should be available within a year or slightly longer. If, upon examination, program designers believe the test is useful, they might approach NYC for its prior research use and save developing a similar instrument.

The tests generally have several problems. Frequently the reading level is too high or the wording too academic; faking appears too easy; scores are cast in such abstract terms that they are difficult to relate to needs for specific empirical treatments; and finally, content seems out-of-date too quickly, to be too school-oriented, or to be obviously inappropriate for some large group - e.g., women, or the poor. On the other hand, the more empirical of the measures, like those more oriented toward work, and the personal history indexes might provide useful selections, or ideas for developing a test that would be appropriate for defining population characteristics in relation to program goals.

E. Ensure integrity and replicability of treatments for individuals and institutions.

Instruments to assess whether planned treatments are occurring both for individuals and for institutions (T1 and T2 levels of the ADR model) represent the greatest gap in available measures. Over the past decade, a number of pragmatic measures of environments have been constructed - college and university environments, elementary and high school, business and industry, home environments, organizational climate, etc. But there is as yet relatively little common agreement about either the content

of what should be measured or about the measurement units for expressing it. A list of characteristics that help an environment facilitate learning, and valid assessment for the items on that list would be of obvious value. For the purpose of School-to Work Transition, the characteristics should represent general classes that can be illustrated by specific examples that are appropriate for various objectives, subject, ages, and work places. Examples of such characteristics might be as follows:

- Repeatable activities to allow practice
- Activities that stimulate information seeking
- A small group to serve as a basis for identity and action
- Warm, accepting people to help when a problem arises
- Activities with recognized standards of excellence to be fulfilled
- Incentives for successful performance
- Activities that allow students to make decisions with real consequences
- Recreational experiences related to learning activities
- Feedback on how one's behavior affects others
- Continuity of experiences, peers and adults who instruct over a period of time

Unfortunately the assessment of direct treatments for individuals probably must be done by questionnaire and use of fairly time-consuming observation scales that must be developed particularly for this program. However, because of the newness of the area, it presents an exciting opportunity to develop new method-

ology in measurement that should be appreciated by program designers.

T2 measures have some of the same development intricacies, since they are likely to depend upon observation in real settings with their lack of laboratory precision and control. Here, however, there are at least three great additional problems. The institutional changes are likely to involve societal values, to be assessed through very subtle indicators, and therefore to have very delayed implementation. For example, one desired outcome might be that the work place should supplement the family in providing an "umbrella" of support to young people. That is, the work place that has reoriented itself for education would provide references for credit, residence, and checking account applications, assume some responsibility for legal action of youth, provide a small group for personal identification, etc. Measures of such changes are likely to come from records and observation; implementing them is likely to threaten the family institution; and the changes are likely to be pretty artificial during the experimentation, actually occurring only with passage of time and change of public attitude.

Again, there is almost a complete assessment gap in this area. However, it offers exciting possibilities for collaboration of varioys social science disciplines in development of measures.

F. Determine student outcomes,including transfer of control of evaluation to the student himself.

The final area of measurement for discussion here is that of

student outcomes, or the O1 level of the ADR planning model. Frequently it is the only area that receives serious attention in educational programs. It has been left for the conclusion here because of a different problem that is involved.

In School-to-Work Transition one of the most important outcomes is that the maturing student learn to evaluate himself. Therefore, the evaluation of outcomes becomes not simply a program evaluation, but part of the program itself. Objectivity in evaluation of others is difficult enough in itself; accurate self evaluation is a very subtle skill to teach. The procedure proposed for doing this is to have adults initially do the outcome evaluation, applying rules in a way that is observerable and understandable by other persons. When the students understand and are comfortable with the evaluation, responsibility should be transferred to small groups of trusted peers who can follow the rules in a constructive fashion. Finally, the mechanics of the procedure can be undertaken by the student himself, and as the rules become internalized, the mechanics can be required on a more and more intermittent basis until the individual evaluates himself almost unconsciously.

Two procedures are suggested for the mechanics of measuring student outcomes. The first is use of existing records and counseling at the work setting - i.e.

- Absenteeism and Tardiness
- Numbers of training and study groups entered

- Fights with fellow workers or peers
- Neatness of the work place
- Requests for change of assignment
- Arrangements for savings, travel to-and-from work, help at home, etc.
- Time and errors to reach standard production
- Participation in organizations and service
- Requests for help

These data can be accumulated for program assessment and discussed with the student for personal growth.

The second procedure that appears to have a great deal of promise is the "Critical Incident" method of assessment developed by Flanagan over 15 years ago. Though it would require development of instruments particularly for this program, the technique can provide a constructive, understandable set of procedures that can be used first by adults, then by other students, then by the subjects themselves.

Simply stated, a number of outcome dimensions are identified, such as those in the major headings on the next two pages. Then, typical behavior classes for each dimension are listed under it and space for recording incidents of each student's behavior in that class are provided. (Again, see the examples on the next two pages.)

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(12) Flanagan, J.C. Teachers' Guide for The Personal and Social Development Program, SRA Program for the Elementary Schools, Science Research Associates, Chicago, 1956.

BEHAVIORS NEEDING IMPROVEMENT

DATE	ITEM	WHAT HAPPENED
11/9	a	"sickness" on arriving at school
11/9	k	same as yesterday
11/12	b	Message from Miss Allen
11/15	a	"sickness" again
12/5	b	Minor incident of broken pencil (see page 4)

PERSONAL ADJUSTMENT

a. Reacted to suggestion, punishment, or teasing with:
   a 1. sulking, hostile remarks, tantrum, crying, door slamming, etc.
   a 2. running away from situation, hiding face, etc.
b. Cried, complained, or was upset over small matter
c. Had difficulty adjusting to situation
d. Failed to participate with group, withdrew
e. Feigned sickness or gave excuse to avoid distasteful situation

RESPONSIBILITY AND EFFORT

a. Attempted to avoid doing his share of work
b. Did not carry through with assigned task
c. Dawdled or was late in doing tasks
d. Failed to do work or made little effort
e. Lost, wasted, or failed to care for supplies, money, etc.
f. Failed to notify others of plans
g. Gave up without trying
h. Made no effort to improve behavior, work, or health habits as suggested

CREATIVITY AND INITIATIVE

a. Was unable to develop even very simple idea when presented to him
b. Was unable to work out plan of action when faced by unexpected or unfamiliar situation
c. Had to be told to undertake something that obviously needed doing

11/12	g	Winston's piggy bank money

INTEGRITY

a. Cheated in class or game
b. Changed grades, altered records, etc.
c. Denied mistake or wrongdoing
d. Blamed others for own mistakes
e. Told a falsehood
f. Kept lost money or articles when found
g. Took property of others

TRAITS

10/29	e	Marjorie - running in Hall
11/15	e	Billy + George Talking
11/16	e	Third graders running in hall

SOCIAL ADJUSTMENT

a. Refused to take turns or share with someone
b. Struck, pushed, spit on, threw things at or interfered with another individual
c. Destroyed or mutilated the personal property of another individual
d. Played tricks on, teased others
e. Tattled on others

10/15	f	"Oh no not again" (to Phillip)
10/22	f	"Don't call on her - Mary can't read"

SENSITIVITY TO OTHERS

a. Left another child out of activity
b. Referred to another's race, religion, or nationality in a disparaging manner
c. Called another child names
d. Made fun of or teased another about handicap
e. Laughed at the mistakes of others
f. Used sarcasm and disparaging remarks in making criticisms and suggestions to or about others

10/29	c	stays near leader
11/2	c	stays near leader
12/11	c	same - less insistent than before

GROUP ORIENTATION

a. Refused to participate in group activity
b. Talked out of turn, talked excessively, or answered for others
c. Continually insisted on being first
d. Disrupted and annoyed the group
e. Exhibited poor sportsmanship in game
f. Influenced others to ill advantage

ADAPTABILITY TO RULES AND CONVENTIONS

a. Failed to conform to general rules of school or classroom
b. Destroyed or mutilated public property
c. Failed to observe the rules of cleanliness, good health
d. Showed poor taste in language or action
e. Disobeyed orders

PERSONAL

BEHAVIORS TO BE ENCOURAGED

PERSONAL ADJUSTMENT

. Reacted in a calm manner to threatening criticism, suggestion, or punishment
. Handled teasing, attacks of others in a humorous or unruffled manner
. Reacted to failure in a constructive manner
. Adjusted well to difficult situation

DATE	ITEM	WHAT HAPPENED
11/9	D	upset this morning - but controlled

RESPONSIBILITY AND EFFORT

. Helped to clean up, arrange, or make special preparation
. Did things promptly
. Got things done in spite of interference from others
. Carried out assigned task without reminder
. Did unusually thorough job on assigned task or elected responsibility
. Notified others of special plans
. Made immediate efforts to improve behavior, work, or health habits as suggested

DATE	ITEM	WHAT HAPPENED
11/30	E	Bobby's assignments

CREATIVITY AND INITIATIVE

. Made up poem, song, or carried out some original or creative project
. Worked out satisfactory solution when faced by unfamiliar or unexpected situation
. Took over in response to special needs
. Attempted to learn special skills on own initiative
. Volunteered to do some task
. Asked to make up work
. Sought additional work

DATE	ITEM	WHAT HAPPENED
10/5	F	the missed spelling test
10/25	A	Musical composition
10/29	E	to clean up broken milk bottle
12/19	C	ad lib in Xmas play

INTEGRITY

. Returned money or articles found
. Admitted guilt in some matter
. Made amends for own errors
. Called attention to errors, etc., that would have been to his advantage to ignore

DATE	ITEM	WHAT HAPPENED
12/17	C	Paid Winston first installment

SOCIAL

SOCIAL ADJUSTMENT

. Shared or took turns with someone
. Helped other children with school work or other activity
. Gave or loaned money or articles to others
. Gave up something to help another

DATE	ITEM	WHAT HAPPENED
10/9	B	showed Billy missed work
11/26	D	recess - helped Sandy

SENSITIVITY TO OTHERS

. Saw that others were not left out
. Cheered up, complimented, or encouraged others
. Was kind to someone with handicap or special problem
. Tactfully provided something for needy child
. Did something for person not feeling well
. Corrected or made suggestions to another in tactful manner
. Interceded for or stuck up for another

DATE	ITEM	WHAT HAPPENED
11/23	B	"Thats good" (Joe's Reading)
11/30	B	Kenny's Clay work.

GROUP ORIENTATION

. Offered to contribute to group activity
. Provided something for benefit of group
. Exhibited good sportsmanship in game
. Communicated suggestion to the class
. Showed independent thinking in the face of opposition for group benefit

ADAPTABILITY TO RULES AND CONVENTIONS

. Followed rules even when unpopular to do so
. Exhibited respect and courtesy for others in language or actions
. Displayed good taste and manners in difficult situation

Such an instrument can be developed by adults, discussed with students, later revised and applied by peers, and finally might help the student develop his own self-evaluation.

SUMMARY

To summarize recommendations for measurement tasks in planning for NIE's School-to-Work Transition:

A. Identify and monitor changes in the societal problem - As much as ppossible, use existing surveys such as National Assessment and the Current Population Survey (CPS) to collect data. In the case of CPS, investigate the possibility of adding periodic questions on the qualitative nature of work experience for adolescents. Review and synthesize one-time studies that describe aspects of attitudes, aspiration, work experience, etc.

B. Collect data for hypothesis generation about solutions to the problem.-Wherever possible utilize data from existing longitudinal studies, pparticularly the Labor Department's longitudinal study of youth in the labor force (Parnes Data). Perhaps an analysis project using this data could be jointly funded by NIE and DOL.

Monitor studies being done with Project Talent data for any interesting findings. Send, as quickly as possible, some help to NCES in revising the instruments for their longitudinal study. Questions should be added on the qualitative nature of adolescent work experience and its relationship to later work success and attitudes. Fund another collection and analysis of data for the Youth-in-Transition Study, working with the project's research staff to ensure relevance of data that is collected. Study treatments and effects used in manpower training programs--particularly Job Corps and Neighborhood Youth Corps.

C. Identify and legitimize desired outcomes- Adopt and adapt some existing set of objectives that fits program needs and has been exposed and received support publicly. A good possibility is the National Assessment COD objectives.

D. Identify and screen entering populations - Program designers should spend time observing students in work situations and collect data and insights on behaviors that relate to the program's desired outcomes. Study existing paper and pencil tests for format considerations in order to develop a test or scale that is consonant with observation data collected earlier. Investigate the content and availability of a test of work attitudes, self concept, and motivation that is being developed by ETS for Neighborhood Youth Corps.

E.. Ensure integrity and replicability of treatments for individuals and institutions. Develop new measures for treatments and environments in an interdisciplinary effort.

F. Determine achievement of student outcomes and transfer control of evaluation to the students themselves. Use existing administrative records to assess work-related behaviors. Develop a critical incident instrument for measuring student outcomes. Adults should use the instrument initially, discussing the results with students. Small groups of students should revise the instrument and use it as a basis for providing feedback to members of the group in a constructive, discussion setting. Finally, mechanics of using the measure should be transferred to the students themselves for guidance in self evaluation.

APPENDIX A

SCHOOL-TO-WORK TRANSITION
POTENTIAL RESEARCH AND DEVELOPMENT PROJECTS AND ACTIVITIES

ADR PLACEMENT	
	Learning Experiences
T1	Research on the effects of heterogeneity or variability of work experience obtained by a student. Is it better to provide short periods of experience in a wide range of different careers, or longer periods of experience with a small sample of careers?
T1	Research on the effects of structuring the sequence of work experiences. Is a progression of career experiences, carefully graded in difficulty so that development of coping skills prerequisite to more advanced opportunities will appear early in the sequence, prior to the point where they will be needed, more effective than a more random sequence?
T1	Research on the effects of the nature of the work situation. What kinds of work experience are most helpful in inculcating appropriate attitudes and generalized coping skills in the student? Examine such variables as amount of pressure or tension, amount of decision making involved, personality characteristics of ones fellow workers, extent of prerequisite knowledge required on the job, and work setting.
A2	Analyses of obstacles to installation of employer-based education and design of proposed solutions for overcoming these obstacles.
	(a) Logistics studies, e.g., feasibility of integrating students into employment setting; entry and exit problems; termination and admission procedures; length of participation time; management studies; staffing; etc.
	(b) Economic problems - cost effectiveness studies, payment systems for student workers, school finance issues related to allocation of resources to non-school agents to assist in programs.

(c) Legal and political problems - credit transferability, accreditation, teacher certification, minimum wage, health and safety insurance, child labor laws, trade entrance, apprenticeship credits, labor management relationships.

T1 Experimental small scale trial and revision of proposed new work programs with projected plans for later wide scale implementation of those programs that are successfully developed. Implementation plans must include employer, student, and community involvement; and manipulation of incentives, information, and laws necessary to the ongoing maintenance of successful program operation beyond the R & D period.

O1 Development of job competency measuring instruments.

T1 Development of industry-based education programs that supplement shortened work days or work weeks. The programs would include apprenticeships to prepare people for job rotation; participation in public service activities; opportunities to learn from and teach others of different age, sex, race, etc.; help in solving interpersonal and community problems; joint efforts to start new small business within the company fold, etc.

Role Models

A2 Conduct tradeoff studies to determine how much it costs to prepare new teachers as compared to selecting, on the basis of teaching performance measures, persons from trade or professional groups who are already competent and then recruiting them into teaching within their own employing organizations.

T1 Evaluate the effects on students of increased adult staff diversity in pilot experiments in employment settings.

School-Work Articulation

A2 Investigate various incentive patterns that may permit the implementation of a shortened period of mandatory school attendance with a recurrent pattern of education and work. Examples could include:

(a) Ways of financing students who wish to reenter the education systems, a national educational opportunities bank, a special loan program for returnees.

(b) Tax deduction incentives for corporations that enable workers to take sabbatical leaves for reeducation.

A2 Study procedures for using education vouchers to reimburse corporations and other public employers for on-the-job education programs.

A2 Support historical, sociological, and anthropological studies to invent new ways of inducing the non-school sector to accept its educational responsibilities.

T2 Experiment with and evaluate school graduation by performance criteria similar to the GED examination rather than by years completed.

T2 Experiment with reducing mandatory attendance age and providing of a given number of years entitlement. A publicly accountable agency could issue a voucher for X years of schooling beyond graduation at age 14 for each eligible student. The voucher could be turned over to any school or university which had been designated as acceptable by the agency and it could be spent at any time during the life of the student.

T2 Develop alternatives to the academic year cycle in order to spread out job opportunities and vacation periods.

LOS ANGELES: CENTER FOR THE STUDY OF EVALUATION

November 21, 1972

TO: Dick Berry and Jean Brandes

FROM: Bev Kooi (Consultant, UCLA's Center for the Study of Evaluation and NIE New Initiatives Program)

SUBJ: NCES LONGITUDINAL STUDY - YEAR ONE FOLLOW UP QUESTIONNAIRE

As you know, I have been exploring the existence of measures that might be useful in the various NIE New Planning Areas, particularly those related to adolescence and the transition of adolescents into adulthood. I appreciate the time each of you spent with me explaining the longitudinal study and receiving the materials and questionnaires. In a quick reading and categorization of the general and work (W) portions of the questionnaires, I came up with the following rough content assignment of questions:

	Items on Base Year Questionnaire	Items on Year One Follow-up Questionnaire
Personal Data	1, 82-86, 88, 89, 92, 95	1, 4, 5, 14, 15
Self Esteem	21, 28	7, 13
Values	20, 24, 26	
Activities	7, 8, 10, 17	2, 6, 8
Aspiration	25, 29, 81	9, 10
Achievement	5	
SES	93, 94	
Work	8, 9	17, 18
School Variables	2, 4, 5, 18, 19	20, 21, W-15, W-20
Knowledge of jobs or acquiring a job	6, 22, 23, 97-104	W6, W11, W12, W16
Decision making, planning	27, 30, 31, 96	3, 4, W1, W14, W19
Influences on work or educational plans	3, 13-16, 87, 90-91	11, 12, 14, W7
Specific work or Educational plans	32-62, 65-80	W2-4, W8-10, W17-W18

This was an exercise to familiarize myself with your questionnaires, but I thought you might be interested in what the content looks like to a naive reader. Forgive my miss-assignments.

There are several ways that revision of the questionnaire might help the planners of new R & D to identify program needs in the area of adolescent

transition. First of all, the kinds of questions that would help us most are those that explore the effects of qualitative differences in high school work experience upon later attitudes and adjustment to work situations. The base year questionnaire seems to have only two questions about high school work experiences (#8 on hours per week in paid and unpaid jobs, and #9 on how the student believes his job relates to his studies, future, etc.). However, the Year One Follow-up questionnaire might well ask some retrospective questions, since the analysis would be relating past experiences to present experiences and feelings. For example, we would be interested whether high school work experiences were voluntary or not, whether the students enjoyed the work or not, how many different kinds of experience they had, whether their jobs were ones adult co-workers depended on them to do or not, whether the students worked along-side adults or not, whether or not they received the same wage as adults who worked, whether or not it made any difference if they did a good job, how long it took them to learn their high school jobs, etc.

This high school job information, in turn, should be related to current feelings toward work and the work situation. The questions to get at such feelings will have to be carefully worded and qualitative in nature, perhaps getting at feelings through asking about how the person acts at work. Two questions from the Feelings section of the Study of Family Economics being done by the University of Michigan Survey Research Center might serve as illustrations:

> "4. Would you say you nearly always finish things once you start them, or do you sometimes have to give up before they are finished?"
>
> "5. Do you spend much time figuring ways to get money?"

Or, the person might be asked to respond to statements like the following:

- I almost never stay home from work when I'm not ill.
- The people I work with think I do a good job.
- The place where I work could not get along without a person doing my job.

Finally, more direct questions about feelings themselves might well get the attitudinal perspectives we need. For example, again from the Michigan Center's Survey:

> "1. Have you usually felt pretty sure your life would work out the way you want it to, or have there been more times when you haven't been very sure about it."

A second kind of revision that might help the questionnaire and thus help everyone using it is to avoid questions that ask the same thing in several, seemingly indiscriminable, ways. Question #13 on the Year One Follow-up illustrates this problem:

> "I take a positive attitude toward myself.
>
> I feel I am a person of worth,on an equal place with others.
>
> I am able to do things as well as most other people.
>
> On the whole, I am satisfied with myself."

It is hard to tell why all of these items are needed, and certainly hard to tell why they are put one after another. I should think the students would simply X through one number for all statements, or perhaps simply vary the number because seeing all of the questions together leads them to believe that the examiner would like them to vary with slight changes in wording. I would suggest shortening and rewording such items and substituting substantively different questions for those that are deleted.

A final suggestion for the questionnaire is that the wording of many questions (on both One Base Year and Year One Follow-up) is awkward, long, and academic. Consider the following examples taken from various questions on the Year One Follow-up:

> "10. I may leave for a time, but intend to complete my present program of studies at my present school and plan to graduate some day." (one of seven choices for response on this question)
>
> "12 How much have your parents or guardians encouraged you in.... conforming to rules and regulations of the community?"
>
> "W-3d Which one of the following describes your employment?
>
> - An employee of a private company, business or individual for wages, salary, or commissions." (one of four such choices under a 5-part question)

I strongly recommend that someone who knows kids and how they talk and think should revise the questionnaire. Perhaps some bright kids should participate.

BK:b

APPENDIX C

PRELIMINARY PROPOSAL

FIFTH WAVE FOLLOW-UP INTERVIEW
YOUTH IN TRANSITION STUDY

Survey Research Center
The University of Michigan
September, 1972

CONTACTS: 313/764-8560

Dr. Jerald Bachman
Dr. Jerome Johnston
Mr. Patrick O'Malley

Introduction

Since 1965 a nationwide research project entitled Youth in Transition has been exploring a number of topics of importance to youth in the United States. A major emphasis has been placed on what many have called "the dropout problem."

After a four-year sequence of interviews and re-interviews from more than two thousand young men, the study reached this basic conclusion:

> Dropping out of high school is overrated as a problem in its own right--it is far more appropriately viewed as the end result or symptom of other problems which have their origin much earlier in life. The difficulties experienced by the dropouts we studied--the low aspirations and accomplishments, and even the limitations in self-esteem and self-concept--were already present or predictable by the start of tenth grade, and there is little evidence that dropping out made matters worse (Bachman, et al., 1971, p. 169).

The data from the study, collected from 1966 (when the respondents were starting tenth grade) until 1970 (when most had been out of high school for a year), fully support that conclusion. Nevertheless, the authors acknowledged that much more remained to be learned:

> We have stated these conclusions based on the evidence presently available. At the same time we recognize the limitations of a study which follows young men only until the age of 19 or 20. We are hopeful that further follow-ups of the Youth in Transition respondents will be possible, thus permitting an assessment of dropouts and stayins in their mid-twenties and perhaps still later (Bachman, et al., 1971, p. 183).

The present memorandum outlines, in a preliminary way, a proposal for such a further follow-up of the Youth in Transition respondents, with particular emphasis upon later occupational attainments of dropouts and high school graduates.

Objectives

We are proposing a data collection in Fall, 1973, which would provide additional information on job and educational status at a point four to seven years beyond the high school experience. For the 1600 young men in the sample there already exist extensive records on family background and personal characteristics, as well as attitudes, behaviors and job experiences during and immediately after high school.

The analyses which would be performed would have two interrelated thrusts. One of the major questions to be addressed was summarized in the introduction: is dropping out of high school related to later job attainment and satisfaction?

If so, does the relationship remain once controls for family background and intelligence are introduced? In other words, does the completion of high school (and the resulting diploma) make a concrete difference in the quality of job which an individual can obtain? Our earlier findings, based on attainments shortly after high school, indicate that dropouts are indeed less frequently employed than graduates, but that this can be more parsimoniously explained by traits and characteristics which were identified before the individual entered high school rather than by the individual's failure to complete high school. Comparing employed dropouts with employed graduates who did not go on to college, we found them almost identical in terms of the status of jobs held and the income received, even after controlling for length of time on the job.

An additional data collection is needed to see if the findings summarized above continue to hold up after several more years in a job setting. This would enable us to evaulate the hypothesis that there are indeed differences in occupational attainment and earnings between dropouts and stayins, but that these differences show up not in initial job attainment but rather as the result of a differential ability to obtain promotions or move into better-paying jobs.

A second related analysis thrust would examine the range of employment experiences for the whole sample and see what factors from an earlier time are related to them. Some of the objectives are these.

1. Examine the impact of early part-time and part-year job experiences during school. Do they result in greater persistence at a full-time job later on? In other words, do they provide valuable work experience for youth?

2. Describe employment patterns, trying to distinguish between those who manage to remain steadily employed and those who stay on a job only long enough to earn money for immediate needs and then quit. Having distinguished some patterns, search for correlates of the behavior.

3. Describe the standards by which jobs are judged acceptable to different youth. What is the importance of wage expectations held prior to employment? How important is challenge in a job in comparison with the pay being offered?

A number of other questions will appropriately result from collaboration between the research staff and the sponsor. In addition, it is planned that the measures will include a core of repeated items from previous Youth in Transition data collections.

Sample

We anticipate a sample size slightly larger than 1600. This number is based on our experience in the last data collection and the fact that we expect

to use intensive track-down procedures for those we have identified as having dropped out of high school. We anticipate that the sample will distribute roughly as follows.

Expected Status, Fall, 1973	Approximate Number
In the labor force for 4 or more years	550-600
In the labor force for 1-4 years	500-550
Graduated from college and entered the labor force within last year or continuing advanced education	325-375
Military Service	100-150

Timing

The data collection itself is planned for the fall of 1973. Work would have to begin in the first quarter of 1973 to prepare for the field operation. A final report on the results could be readied by Fall, 1974.

Principal Investigators

The three principal investigators for this project include Jerald Bachman, Program Director; Jerome Johnston, Study Director; and Patrick O'Malley, Study Director. Dr. Bachman has directed the Youth in Transition Project from its inception seven years ago. Dr. Johnston has been affiliated with the project since 1968 and is a major author in the monograph series. Mr. O'Malley has been analyzing data on the project for several years and is soon to complete his Ph.D. dissertation based on data from the project.

Proposed Budget
Wave 5, Youth in Transition Study
(18-Month Duration)

Total Research Personnel	$ 87,810
Total Field Personnel	$ 80,479
Keypunching and Data Processing Total	$ 10,000
Total Supplies and Materials	$ 11,000
Total Travel (including interviewer staff and research staff)	$ 18,000
Payment to Respondents	$ 16,000
TOTAL DIRECT COSTS	$ 223,289
INDIRECT COSTS	95,420
TOTAL BUDGET	$ 318,709

PERSONAL

BEHAVIORS TO BE ENCOURAGED

1. PERSONAL ADJUSTMENT

A. Reacted in a calm manner to threatening criticism, suggestion, or punishment
B. Handled teasing, attacks of others in a humorous or unruffled manner
C. Reacted to failure in a constructive manner
D. Adjusted well to difficult situation

DATE	ITEM	WHAT HAPPENED
11/9	D	upset this morning - but controlled

2. RESPONSIBILITY AND EFFORT

A. Helped to clean up, arrange, or make special preparation
B. Did things promptly
C. Got things done in spite of interference from others
D. Carried out assigned task without reminder
E. Did unusually thorough job on assigned task or elected responsibility
F. Notified others of special plans
G. Made immediate efforts to improve behavior, work, or health habits as suggested

11/30	E	Bobby's assignments

3. CREATIVITY AND INITIATIVE

A. Made up poem, song, or carried out some original or creative project
B. Worked out satisfactory solution when faced by unfamiliar or unexpected situation
C. Took over in response to special needs
D. Attempted to learn special skills on own initiative
E. Volunteered to do some task
F. Asked to make up work
G. Sought additional work

10/5	F	the missed spelling test
10/25	A	Musical composition
10/29	E	to clean up broken milk bottle
12/19	C	ad lib in Xmas play

4. INTEGRITY

A. Returned money or articles found
B. Admitted guilt in some matter
C. Made amends for own errors
D. Called attention to errors, etc., that would have been to his advantage to ignore

12/17	C	Paid Winston first installment

SOCIAL

5. SOCIAL ADJUSTMENT

A. Shared or took turns with someone
B. Helped other children with school work or other activity
C. Gave or loaned money or articles to others
D. Gave up something to help another

10/9	B	showed Billy missed work
11/26	D	recess - helped Sandy

6. SENSITIVITY TO OTHERS

A. Saw that others were not left out
B. Cheered up, complimented, or encouraged others
C. Was kind to someone with handicap or special problem
D. Tactfully provided something for needy child
E. Did something for person not feeling well
F. Corrected or made suggestions to another in tactful manner
G. Interceded for or stuck up for another

11/23	B	"that's good" (Joe's Reading)
11/30	B	Kenny's clay work.

7. GROUP ORIENTATION

A. Offered to contribute to group activity
B. Provided something for benefit of group
C. Exhibited good sportsmanship in game
D. Communicated suggestion to the class
E. Showed independent thinking in the face of opposition for group benefit

8. ADAPTABILITY TO RULES AND CONVENTIONS

A. Followed rules even when unpopular to do so
B. Exhibited respect and courtesy for others in language or actions

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- Sought additional work

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- Called attention to errors, etc., that would have been to his advantage to ignore

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ADAPTABILITY TO RULES AND CONVENTIONS

- Followed rules even when unpopular to do so
- Exhibited respect and courtesy for others in language or actions

BEHAVIORS NEEDING IMPROVEMENT

DATE	ITEM	WHAT HAPPENED
11/8	e	"sickness" on arriving at school
11/9	e	same as yesterday
11/12	b	Message for Mrs. Allen
11/15	e	"sickness" again
12/5	b	Minor incident of broken pencil

(see page 4)

PERSONAL ADJUSTMENT

a. Reacted to suggestion, punishment, or teasing with:
a-1. sulking, hostile remarks, tantrum, crying, door slamming, e
a-2. running away from situation, hiding face, etc.
b. Cried, complained, or was upset over small matter
c. Had difficulty adjusting to situation
d. Failed to participate with group, withdrew
e. Feigned sickness or gave excuse to avoid distasteful situation

RESPONSIBILITY AND EFFORT

a. Attempted to avoid doing his share of work
b. Did not carry through with assigned task
c. Dawdled or was late in doing tasks
d. Failed to do work or made little effort
e. Lost, wasted, or failed to care for supplies, money, etc.
f. Failed to notify others of plans
g. Gave up without trying
h. Made no effort to improve behavior, work, or health habits as sugge

CREATIVITY AND INITIATIVE

a. Was unable to develop even very simple idea when presented to
b. Was unable to work out plan of action when faced by unexpec or unfamiliar situation
c. Had to be told to undertake something that obviously needed do

INTEGRITY

11/12	g	Winston's piggy bank money

a. Cheated in class or game
b. Changed grades, altered records, etc.
c. Denied mistake or wrongdoing
d. Blamed others for own mistakes
e. Told a falsehood
f. Kept lost money or articles when found
g. Took property of others

TRAITS

SOCIAL ADJUSTMENT

10/29	e	Marjorie - running in Hall
11/15	e	Billy & George - talk/passing
11/16	e	Third graders running in hall

a. Refused to take turns or share with someone
b. Struck, pushed, spit on, threw things at or interfered with anoth individual
c. Destroyed or mutilated the personal property of another individ
d. Played tricks on, teased others
e. Tattled on others

SENSITIVITY TO OTHERS

10/15	f	"Oh no not again" (to Phillip)
10/22	f	"Don't call on her - Mary can't read"

a. Left another child out of activity
b. Referred to another's race, religion, or nationality in a disparagi manner
c. Called another child names
d. Made fun of or teased another about handicap
e. Laughed at the mistakes of others
f. Used sarcasm and disparaging remarks in making criticisms a suggestions to or about others

GROUP ORIENTATION

10/29	c	Stops hour leader
11/2	c	stops hour leader
12/11	c	same - less insistent than before

a. Refused to participate in group activity
b. Talked out of turn, talked excessively, or answered for others
c. Continually insisted on being first
d. Disrupted and annoyed the group
e. Exhibited poor sportsmanship in game
f. Influenced others to ill advantage

ADAPTABILITY TO RULES AND CONVENTIONS

a. Failed to conform to general rules of school or classroom
b. Destroyed or mutilated public property
c. Failed to observe the rules of cleanliness, good health
d. Showed poor taste in language or action
e. Disobeyed orders

Appendix D

Behavioral Outcomes for Students

Part I. Unpublished Objectives

Part II. Two Sections of National Assessment's Career and Occupational Development Objectives

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Part I. Characteristics of people who have successfully matured

1. They feel in control of their own personal lives. They can state the purpose of their own activities and the consequences they expect from them. They balance their own activity [e.g., work, rest, recreation, service, etc.] over time and in new settings. They provide for personal financial security during a crisis [e.g., by purchasing insurance, budgeting income, saving money, etc.]

2. They have relatively accurate self-knowledge. They judge their own work or product quality with fair accuracy and do not seriously over-or underestimate their own strengths and weaknesses.

3. They enjoy learning new things. Because the process of learning and the development of new skills is fun for them, they have gained success in performing a number of tasks and can perform the same task under varying circumstances. They can switch from leading activities to working independently or accepting direction from others as appropriate.

4. They are skillful at getting information. They can find and approach appropriate persons to get information, can systematically ask questions that result in needed evidence and can fill gaps in clarity of instruction or information.

5. They can make decisions and follow up on them. They can understand the interdependence of a sequence of decisions. They take responsibility for personal decisions and for on-the-job judgments that have real business consequences.

6. They confidently engage in activities, including work. They can find activities that suit their own interests and needs and know that appropriate work or service to others can be a source of personal satisfaction. They feel able to and responsible for choosing an occupation. They can compare a job or job setting with their own needs and interests, and do not place unreasonable limitations on acceptability of jobs or other activities. They feel able to perform successfully on a job.

7. They are organized and have good work habits. They can identify and comply with regulations to get a permit, license, variance, job application, etc. They are generally punctual and organize time to meet major deadlines. They persist at a task until it is completed or obviously ill conceived.

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9. They respect people who are different from themselves. They recognize that people have different attitudes toward work, friendship, and life in general. They respect and admire others who try to achieve to the best of their ability and recognize excellence attained by those who have different interests, values, and work fields. They encourage others to develop and to use their skills and abilities to achieve maximum competence.

10. They are considerate in group settings. They are willing to help others learn or to provide information they may find useful. They do and return favors as appropriate and accommodate special needs and skills of other members of groups (e.g., blindness, special knowledge or experience, etc.). They are considerate in teamwork settings (e.g., pick up belongings after use, work quietly, do not interrupt others, do their fair share of work, etc.)

11. They accept family and community responsibility. They work around the home, care for the young or ill, give service to organizations, help protect the environment, etc. They provide for such secondary responsibilities while holding a job.

12. They are willing to judge or question others. They can judge the work or product of others but be discreet about the shortcomings they discover. They question regulations or demands of others that seem arbitrary or unwise (e.g., high-pressure salesmanship, unnecessary rules or deadlines, etc.). They can communicate unpleasant information when necessary (e.g., an apartment mate is disturbing others, an employee must be fired, a peer's products are not up to standards, etc.)

8.. They are alert to new opportunities. They frequently generate new ideas or variations of techniques on the job. They routinely compare new ideas and opportunities with old ones, and often use their own time and financial resources to begin new activities or learn new skills. They attempt, as appropriate, to convince others of the worth of their ideas.

exploited; impending layoffs; conflicts with supervisors; internal politics; health hazards).

II. IMPROVE CAREER AND OCCUPATIONAL CAPABILITIES

Along with planning for a career goes the actual doing of things that further those plans or that widen one's knowledge and skills. This objective is concerned with the implementation of career plans and with active participation in both in-school studies and out-of-school activities that enhance one's career and occupational capabilities.

Age 9 (1) Attempt to gain as much as possible from school. (Behaviors requisite to success in school are given under Objective IV—Practice Effective Work Habits.)

(2) Do home chores (for example, run errands; water flowers; care for animals; help with cleaning; take care of younger siblings; prepare parts of meals).

(3) Engage in hobbies (for example, collect stamps, rocks, and coins; read; draw; paint; play musical instruments).

(4) Visit places of interest in the community (such as planetariums, aquariums, dairies, newspaper plants, museums, zoos, factories, colleges).

(5) Participate in extracurricular and community activities (such as scouts, 4-H, school clubs, organized sports, contests, amateur shows).

(6) Use school and public libraries.

(7) Watch educational television programs.

Age 13 (in addition to Age 9)
(1) Attend educational events outside of school (such as science, agricultural, trade, and county fairs; musical programs; auto shows; plays; travel lectures; art exhibits; industrial displays).

(2) Engage in part-time work (such as delivering papers, baby-sitting, gardening, helping in stores, raising livestock).

(3) Participate in coursework outside of regular school

(4) Participate in company-sponsored training programs (for example, management, technical, academic, skilled).

(5) Join professional and vocational organizations, including unions, to be eligible for training programs, advancement opportunities, placement services, periodic publications.

(6) Study toward, and take any necessary examinations for, professional registration and certification (for example, engineering fields, architecture, teaching and other educational services, cosmetology, boiler operation, and accounting).

(7) Attempt to renew and broaden interests and values (maintain relevancy of focus on their occupations).

III. POSSESS SKILLS THAT ARE GENERALLY USEFUL IN THE WORLD OF WORK

The six main categories of generally useful skills are numerical, communications, manual-perceptual, information-processing and decision-making, interpersonal, and employment-seeking. Some of these skill categories apply to other subject areas in the National Assessment besides career and occupational development. For example, communication skills are related to both the reading and writing areas; numerical skills are included in the mathematics area; information-processing and problem-solving skills include many social studies behaviors; and some work habits and interpersonal relations are also found in citizenship. To minimize overlaps, practical or on-the-job behaviors, rather than academic skills, have been selected to illustrate the COD subobjectives whenever possible. Second, measures common to other subject areas will not be used in the assessment of generally useful skills but will be referenced in reporting of results.

Although not strictly a generally useful skill, employment-seeking skill has been included under this objective. It is useful not only for initial job entry but also for improvement of occupational status and is a necessary complement to the other generally useful skills.

A. *Have generally useful numerical skills.*

1. Perform calculations and transactions involving money. For example:

Age 9 Make change; total up own purchases; do very simple mental computations without figuring on paper.

(2) Take good care of clothes (for example, properly launder and iron or dry clean; repair; store properly).

(3) Have regular medical and dental checkups.

(4) Seek professional help when needed (for example, doctor, dentist, and psychiatrist).

V. HAVE POSITIVE ATTITUDES TOWARD WORK

Today more than ever there is a great diversity of life styles. An occupation or career is only one way of achieving personal self-fulfillment in life. Nevertheless, it is possible within the context of career and occupational development to identify desirable attitudinal goals that should result from the educational process. Thus, National Assessment seeks to assess attitudes toward work not only in terms of societal goals but also as acceptance and understanding of the diversity of life styles, regard for competence and excellence in endeavors of many different kinds, and pride in one's own achievements.

A. *Recognize the bases of various attitudes toward work.*

Age 9 Know that some people have jobs and others do not.

Age 13 Know that appropriate work can be a source of personal satisfaction.

Ages 17, A (1) Recognize that people have different attitudes toward work (for example, know that some people work only for the money, that some people find their work absorbing and rewarding, that some people avoid looking for jobs, and that some people place work second in importance to other more personally meaningful activities).

(2) Understand why people have the attitudes that they do toward work (for example, understand that attitudes toward work are affected by many factors, such as education, age, sex, family income, race, religion, nationality, work experience, and self-concept; know that some people have experienced inequalities in obtaining work and on jobs; know that the "work ethic" is a predominant attitude in America's history; know that differences in social, ethnic, racial, and educational background make it easy for some people to obtain good jobs and difficult for others to obtain any job; recognize that frustrated ambitions may affect attitudes).

(4) Work to extend civil rights in the world of work to all persons regardless of race, religion, sex, or ethnic or socioeconomic origin.

(5) Believe that members of both labor unions and business groups should strive to be ethical in the stand they take on labor-management issues.

(6) Appreciate the advantages and disadvantages to labor unions, employers, and the public of existing labor legislation, such as the machinery for settling labor disputes, regulation of union practices, and antitrust laws.

(7) Maintain high personal ethical standards to contribute to the standards of their companies and vocations or professions.